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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/524,270
Filing Date: February 11, 2005
Appellant(s): ITOH ET AL.

MAILED
FEB 06 2008
GROUP 1700

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 11/27/2007 appealing from the Office action
mailed 5/31/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US-5,732,318 Natsuhara, Masuhiro 03.24.1998 399/329

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Natsuhara et al (US 5,732,318).

Natsuhara teaches a heater with an aluminum nitride substrate with a length of 300 mm and various lengths and a thickness of 0.7 mm (example 1). Regarding claims 26-28, the AlN substrate further has a metal paste applied to the surface in a pattern and is then covered by a protective film or layer (Ref. Claims 4, 7, 9). The metal paste is considered substantially similar to applicant's metal layer, which can function as and be considered an "electrode" or otherwise attached to an electrode (see figures and

explanations for exemplary models), and the protective film of Natsuhara is considered to be substantially similar to applicant's claimed insulating layer.

Natsuhara teaches a wide range of possible thermal conductivities, with a conductance over 50 W/mK being preferred for optimal functionality of the heater, including applicants claimed range (see claim 6, Table 6, and column 9 line 35-50). It further teaches a warpage of not more than 2.0 mm (column 9 line 30-35), which is considered to encompass applicant's claimed range. However, the reference is silent as to the maximum length being greater than 320 mm or the waviness claimed by applicant.

It is the examiner's position that because of the similarity in composition conductance and warpage the waviness would inherently be substantially similar.

Regarding the process limitations of claim 23, "even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.", (In re Thorpe, 227 USPQ 964,966). Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product (In re Marosi, 710 F.2d 798,802,218 USPQ 289,292 (Fed. Cir. 1983), MPEP 2113)

It would have been obvious to one of ordinary skill in the art at the time of the invention to use a length of greater than 320 mm because the substrates are cut to size (example 2) of various lengths and could be sized to fit any heater apparatus of different size requirements.

Further, see *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.) and *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), wherein it was held that the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device.

(10) Response to Argument

Applicant's arguments filed 11/27/2007 have been fully considered but they are not persuasive. It is the examiner's position that because of the similarity in composition conductance and warpage the waviness would inherently be substantially similar.

Applicant argues that the Natsuhara reference does not teach a length greater than 320 mm and does not render it obvious due to the difficulty in the prior art in producing the article as claimed.

Given that Natsuhara teaches an exemplary embodiment wherein the length is 300 mm, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a length of greater than 320 mm because the substrates are cut to size (example 2) of various lengths and could be sized to fit any heater apparatus of different size requirements.

Further, applicant's independent claim 1 reads, "a maximum length of 320 mm or more", which sets the maximum length of the aluminum nitride sintered body in any one dimension at 320 mm or more without setting a minimum length. Therefore, the 300 mm embodiment of Natsuhara can be considered to read on or render obvious the claimed invention of applicant since it to has "a maximum length of 320 mm or more".

Further, see *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) ("mere scaling up of a prior art process capable of being scaled up, if such were the case, would not establish patentability in a claim to an old process so scaled." 531 F.2d at 1053, 189 USPQ at 148.) and *In Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984), wherein it was held that the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions. would not perform differently than the prior art device, the claimed device was not

patentably distinct from the prior art device. Applicant has still not put forth a reasoning for why his "scaling up" and change in "relative dimensions" is not substantially similar to that of the prior holdings.

Applicant has not asserted a difference in function and the examiner has shown that the claimed properties are contemplated, present, and or obvious in view of Natsuhara. Although Natsuhara does not give an exemplary embodiment having a length more than 320 mm there is no reason to conclude, nor has applicant successfully argued, that the claimed length and other claimed properties would not have been obvious to one of ordinary skill in the art at the time of the invention. Further, Natsuhara teaches a thickness within applicant's claimed range (see above).

Natsuhara also teaches a wide range of possible thermal conductivities, with a conductance over 50 W/mK being preferred for optimal functionality of the heater, including applicants claimed range (see claim 6, Table 6, and column 9 line 35-50). No patentable distinction is seen between applicant's claimed invention and Natsuhara. It further teaches a warpage of not more than 2.0 mm (column 9 line 30-35), which is considered to encompass applicant's claimed range. This would encompass a range of 0 to 2.0 mm, and would render obvious applicant's claimed range. It is not necessary that the reference disclose a specific example within applicant's range, merely that it would have been obvious to one of ordinary skill in the art at the time of the invention to obtain an article within applicant's claimed range. Applicant's further arguments of examples in the reference that fall outside applicant's claimed range are not relevant.

Finally, applicant argues that the Natsuhara disclosed warpage is obtained after grinding while the current invention is not grinded. However, it is noted not in applicant's claim 23 that the claimed invention undergoes a substantially similar polishing step. Further, the method of obtaining the article is not relevant wherein the article is otherwise taught.

It is the examiner's position that because of the similarity in the claimed composition, conductance, and warpage the waviness would inherently be substantially similar.

Applicant has offered no substantive evidence as to a difference in warpage or waviness between the art of record and the current invention. Barring evidence to the contrary the finding of inherency is maintained.

Applicant has also offered no substantive argument with respect to the dependent claims 23-28 only referring back to say he incorporates his arguments regarding independent claim 1.

Rejections maintained.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Examiner Daniel Miller 1794

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